



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/505,419	08/24/2004	Naomi Noda	120881	7575
25944 7590 01/26/2009 OLIFF & BERRIDGE, PLC P.O. BOX 320850 ALEXANDRIA, VA 22320-4850				
EXAMINER				
NGUYEN, CAM N				
ART UNIT		PAPER NUMBER		
1793				
MAIL DATE		DELIVERY MODE		
01/26/2009		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/505,419

**Applicant(s)**

NODA ET AL.

**Examiner**

Cam N. Nguyen

**Art Unit**

1793

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 10/23/08 (an amendment/response).
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 21-40 is/are pending in the application.
- 4a) Of the above claim(s) 31-40 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 21-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB008)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

**Response to Amendment**

1. The amendment filed on 10/23/08 has been made of record and entered. Claims 1-20 have been canceled. Claims 21-22, 27, & 29 have been amended.

Claims 21-40 are currently pending in this application.

**Status of Withdrawn Claim(s)**

2. This application contains claims 31-40 are drawn to an invention nonelected with traverse in the reply filed on 03/26/08. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

**Claim Rejections - 35 USC § 102(b)**

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 21-23 & 25-30 are rejected under 35 U.S.C. 102(b) as being anticipated by Miyoshi et al., hereinafter referred to as “Miyoshi ‘521”, (US Pat. 6,004,521).

Miyoshi ‘521 discloses a catalyst which comprises a heat resistant support; a porous layer coated on said heat resistant support; a noble metal catalyst coated on said porous layer; and a NOx storage component including at least one member selected from the group consisting of

alkaline-earth metals, rare-earth metals, and alkali metals, etc. and loaded on said porous layer; etc. (see col. 11, claim 1, claim 4, & claim 6). The heat resistant support includes at least one member selected from the group consisting of a monolithic support formed of cordierite and a metallic support (see col. 11, claim 2). The porous layer includes at least one member selected from the group consisting of alumina, silica-alumina, etc. (see col. 11, claim 3). See also entire reference for further details.

The limitation on “the coating layer contains 90% or more of alumina” in the instant claims 21 & 29 is noted. It would appear that since the reference teaches that the porous layer contains alumina, which provides for the porous layer containing 100% alumina, which meets the claimed limitation.

There is no patentable distinction seen between the claimed catalyst and catalyst carrier and that disclosed by Miyoshi ‘521. Thus, the claims are anticipated by the teaching of the reference.

**Claim Rejections - 35 USC § 102(e)**

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002

do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 21-28 are rejected under 35 U.S.C. 102(e) as being anticipated by Ohno et al., hereinafter referred to as "Ohno '825", (US Pat. 6,939,825 B1).

Ohno '825 discloses catalyst carrier, wherein the carrier comprises particles of silicon-containing ceramic material and each of these particles is covered by a film of alumina, etc. (see col. 10- col. 11, claim 1). The silicon-containing ceramic material comprises an oxide silicon ceramic (see col. 11, claim 4). The oxide silicon ceramic comprises at least one of sialon, mullite and cordierite (see col. 11, claim 5). The carrier comprises a honeycomb-shaped porous sintered body of silicon carbide (see col. 11, claim 7). The silicon-containing ceramic material comprises a layer of SiO<sub>2</sub> on a surface thereof (see col. 11, claim 8). Suitable aluminas including gamma-alumina, delta-alumina, and theta-alumina (see col. 6, ln 46-50), and alpha-alumina is also showing suitable at col. 9, ln 39. See also entire reference for further details.

The limitation on "the coating layer contains 90% or more of alumina" in the instant claim 21 is noted. It would appear that since the reference teaches alumina is covered as a coating layer on the SiO<sub>2</sub> layer and silicon-containing ceramic material, which provides for the coating layer containing 100% of alumina, which meets the claimed limitation.

There is no patentable distinction seen between the claimed catalyst carrier and that disclosed by the reference. Thus, the claims are anticipated by Ohno '825.

**Claim Rejections - 35 USC § 103**

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 29 & 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohno et al., hereinafter referred to as "Ohno '825", (US Pat. 6,939,825 B1) taken together with Miyoshi et al., hereinafter referred to as "Miyoshi '521", (US Pat. 6,004,521).

Ohno '825 discloses a catalyst carrier having the claimed catalytic structure (see paragraph 4 above for specific details), but does not disclose "a catalytic material carried on the carrier, and wherein the catalytic material contains an alkali and/or alkaline earth metal".

It would have been *prima facie obvious* to one of ordinary skill in the art at the time the invention was made to have added and supported such known catalytic material on the catalyst carrier of Ohno '825 in order to achieve an effective catalyst material because it is known and taught by Miyoshi '521. Specifically, Miyoshi '521 teaches a similar catalyst containing a NO<sub>x</sub> storage component including at least one member selected from the group consisting of alkaline-earth metals, rare-earth metals, and alkali metals, etc. and loaded on a porous layer; etc. (see Miyoshi '521 at col. 11, claim 1, claim 4, & claim 6 & paragraph 3 above for further details).

**Response to Applicants' Arguments**

6. The remarks filed on 10/23/08 have been fully considered, but not deemed persuasive in view of the new ground of objection(s) and/or rejection(s) above.

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

**Citations**

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. All references are cited for related art. See PTO-892 Form prepared.

**Conclusion**

9. Claims 21-40 are pending. Claims 21-30 are rejected. Claims 31-40 are withdrawn due to nonelected (distinct) invention(s). No claims are allowed.

**Contacts**

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Primary Examiner CAM N. NGUYEN, whose telephone number is 571-272-1357. The examiner can normally be reached on M-F, 9:00 AM - 6:30 PM, at alternative work site.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman, can be reached on 571-272-1358. The fax phone number for the organization where this application or proceeding is assigned is 571-272-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Cam N. Nguyen/

Primary Examiner

Art Unit: 1793

/C. N. N./

January 19, 2009